

as follows: "In this specification, the 'resource' may be a window, a program (object), a command, or data." Page 8, lines 8-9. Later the definition is reiterated: "The 'resources' may be windows, programs (objects), commands, and data including voice, animated images, and still images." Page 13, lines 4-6.

In view of the express definition of "resource" in the applicants' specification, the Examiner agreed that the "resources" of claims 1, 27, and 30 are substantially different from the machines and workers that might be "resources" in Fargher.

Explanatory comments were also presented to the Examiner regarding the present invention's distinctive objectives and results. Fargher provides a method and system for planning production in a factory so that work for machines and workers is scheduled for best factory performance. On the other hand, as explained to the Examiner, the present invention relates to sharing of computer-based resources. An important advantage provided by the invention is an improved balance between workability (of worker groups that may share computer-related resources) and security (to maintain the integrity of the shared resources).

The Examiner requested that the applicants' response to the Office Action include remarks calling attention to these distinctions. The Examiner also agreed, in view of the foregoing differences, that the claimed invention appeared to be patentably distinct from the system of Fargher.

The Rejection

In the Office Action, the Examiner rejected claims 1-18 and 25-32 under 35 U.S.C. §103(a) as unpatentable over Fargher. This rejection is respectfully traversed for the reasons outlined in the foregoing Summary, which reasons will be reiterated as follows.

The invention relates to management of resources among groups of workers that carry out jobs using computers. As noted above, the specification defines the term "resource" to mean "a window, a program (object), a command, or data." The system of claim 1, for

example, comprises a resource manager that manages resources allocated to each group, and a job monitor that maintains the security of the resources allocated to the groups.

By the claimed arrangements of features, the present invention solves a persistent problem that has existed in the art of computerized worker collaboration. This problem relates to the fact that users need such collaboration systems to provide both workability and resource security, but these two needs are frequently in mutual opposition. See the specification at page 2, lines 9-16. In more detail, security is important because if access to resources is uncontrolled, then workers in one group may introduce undocumented changes to or even delete another group's resource. See page 1, lines 12-26. On the other hand, the sharing arrangement must provide an acceptable level of workability, e.g., provide each user with easy operation. See page 1, lines 10-12. In particular, it must be easy to share the resources among groups of workers. See page 2, lines 5-12.

The present invention simultaneously satisfies these competing needs to a degree not unattained with previous approaches. See page 1, line 26, through page 2, line 8, and page 2, lines 27-30. Various advantages of the invention include dynamic control over rights to use resources. A first group can be enabled to use a resource of a second group, upon receiving permission from the second group. The first group can transfer its own data to the second group for processing. The attributes of the resources can be changed according to job status, worker assignment, and group arrangement. See page 2, line 33, through page 3, line 9.

As noted above, Fargher discloses a system for planning production in a manufacturing facility such as a semiconductor wafer fabrication plant. See col. 1, lines 14-22, and col. 4, lines 31-36. The reference system generates a plan "represented by the processing capacity of each resource group in the factory, divided into contiguous time intervals, together with the work planned for each time interval." See col. 2, lines 19-22; see also col. 7, lines 19-32. The "resources" of the factory are its processing equipment and personnel, such as specific machines and employees to operate those machines. See col. 5, lines 6-8.

Fargher neither discloses nor suggests a system providing a feature of resource management as recited in the rejected claims. The function of the reference system's planner is to generate a plan representation that commits processing time for resource groups to particular jobs. See col. 7, lines 34-38. This function reflects the fact that any given machine or employee ("resources," according to Fargher) can be committed to only one task at a time. It provides a solution to the problem of conflicts in which two tasks need to be processed on the same machine at the same time, or one worker is assigned to perform two tasks at the same time. Such conflicts may be termed "conflicts of exclusive use." Conflicts between simultaneous uses of such "resources" are impossible, because simultaneous uses are themselves impossible.

In contrast, a window, a software object, a command, or a data set could possibly be accessed by many different workers at the same time. In the absence of restrictions on such access, it could happen that a worker or workers from one group might access and delete or otherwise overwrite a resource created and maintained by another group. The need for the present invention arises from the fact that software-related resources, unlike physical resources, are subject to such conflicts of simultaneous use.

A significant advantage of the present invention is that it provides control over the kinds of simultaneous use that can occur: only workers in groups to which a resource has been allocated can use the resource, unless permission has been given from one of the allocated groups. In other words, to avoid the security problems that arise with resources that can be objects of simultaneous access, the invention establishes a limited, flexible type of exclusivity. A purpose of the invention is thus to create, in a limited form, the exclusive-use feature from which the problem addressed in Fargher arises.

It follows that the system of Fargher lacks the controls on availability of resources that are provided by the resource allocation of the present invention. In the reference, the "resources" are intrinsically available for exclusive use only. A significant effect of the invention, on the other hand, is to enforce a controlled form of exclusive use for "resources"

that can be subject to simultaneous use. This difference amounts to substantially diametrical opposition of objectives and illustrates that the claimed invention is, at best, unrelated to the objectives and results disclosed in Fargher.

It follows that the rejection of claims 1-18 and 25-32 as unpatentable over Fargher is incorrect. Nothing in the system of Fargher would have suggested the combination of an allocated-resource management feature and a permission monitoring feature, as recited in the rejected claims. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 33-34 are newly presented with this response to define the invention in alternative terms. For at least the reasons set forth above with respect to claims 1-18 and 25-32, it is respectfully submitted that these new claims are also patentable. Examination and allowance of claims 33-34 are respectfully requested.

CONCLUSION

In view of the foregoing remarks and amendments, it is respectfully submitted that all grounds of objection and rejection have been removed and that all pending claims patentably distinguish over the prior art, taken in any proper combination. The application is accordingly submitted as being in condition for allowance, which action is earnestly solicited.

Request for Interview

The Examiner is respectfully requested to grant a personal Interview, to be conducted prior to issuance of a final Office Action, if the Examiner continues to find issues of patentability regarding the pending claims. The Examiner's cooperation in contacting the undersigned attorney to arrange such an interview, at the Examiner's earliest convenience, is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

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If any additional fees are required with filing of this Amendment, it is respectfully requested that such necessary fees be charged to our Deposit Account No. 19-3935.

Respectfully submitted,

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